



SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt
SEQUENCE LISTING

<110> Syrrx, Inc.
<120> CRYSTALLIZATION OF 11-BETA-HYDROXYSTEROID DEHYDROGENASE TYPE 1
<130> SYR-HSD-5001-C1
<140> US 10/800,024
<141> 2004-03-12
<160> 13
<170> PatentIn version 3.2
<210> 1
<211> 292
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(292)
<223> Amino acid sequence for full-length human wild type
11-beta-hydroxysteroid dehydrogenase type 1

<400> 1

Met Ala Phe Met Lys Lys Tyr Leu Leu Pro Ile Leu Gly Leu Phe Met
1 5 10 15

Ala Tyr Tyr Tyr Tyr Ser Ala Asn Glu Glu Phe Arg Pro Glu Met Leu
20 25 30

Gln Gly Lys Lys Val Ile Val Thr Gly Ala Ser Lys Gly Ile Gly Arg
35 40 45

Glu Met Ala Tyr His Leu Ala Lys Met Gly Ala His Val Val Val Thr
50 55 60

Ala Arg Ser Lys Glu Thr Leu Gln Lys Val Val Ser His Cys Leu Glu
65 70 75 80

Leu Gly Ala Ala Ser Ala His Tyr Ile Ala Gly Thr Met Glu Asp Met
85 90 95

Thr Phe Ala Glu Gln Phe Val Ala Gln Ala Gly Lys Leu Met Gly Gly
100 105 110

Leu Asp Met Leu Ile Leu Asn His Ile Thr Asn Thr Ser Leu Asn Leu
115 120 125

Phe His Asp Asp Ile His His Val Arg Lys Ser Met Glu Val Asn Phe
130 135 140

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

Leu Ser Tyr Val Val Leu Thr Val Ala Ala Leu Pro Met Leu Lys Gln
145 150 155 160

Ser Asn Gly Ser Ile Val Val Val Ser Ser Leu Ala Gly Lys Val Ala
165 170 175

Tyr Pro Met Val Ala Ala Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly
180 185 190

Phe Phe Ser Ser Ile Arg Lys Glu Tyr Ser Val Ser Arg Val Asn Val
195 200 205

Ser Ile Thr Leu Cys Val Leu Gly Leu Ile Asp Thr Glu Thr Ala Met
210 215 220

Lys Ala Val Ser Gly Ile Val His Met Gln Ala Ala Pro Lys Glu Glu
225 230 235 240

Cys Ala Leu Glu Ile Ile Lys Gly Gly Ala Leu Arg Gln Glu Glu Val
245 250 255

Tyr Tyr Asp Ser Ser Leu Trp Thr Thr Leu Leu Ile Arg Asn Pro Cys
260 265 270

Arg Lys Ile Leu Glu Phe Leu Tyr Ser Thr Ser Tyr Asn Met Asp Arg
275 280 285

Phe Ile Asn Lys
290

<210> 2
<211> 807
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(807)
<223> Human cDNA sequence encoding residues 24-292 of
11-beta-hydroxysteroid dehydrogenase type 1

<400> 2
aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggccagc 60
aaagggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg 120
acagcgaggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttggagca 180
gcctcagcac actacattgc tggcaccatg gaagacatga ccttcgcaga gcaatttgtt 240

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

```

gccaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac 300
acttctttga atctttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac 360
ttcctcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga 420
agcattgttg tcgtctcctc tctggctggg aaagtggctt atccaatggg tgctgcctat 480
tctgcaagca agtttgcttt ggatgggttc ttctcctcca tcagaaagga atattcagtg 540
tccaggggtca atgtatcaat cactctctgt gttcttgccc tcatagacac agaaacagcc 600
atgaaggcag tttctgggat agtccatatg caagcagctc caaaggagga atgtgccctg 660
gagatcatca aaggggggagc tctgcgccaa gaagaagtgt attatgacag ctcaactctgg 720
accactcttc tgatcagaaa tccatgcagg aagatcctgg aatttctcta ctcaacgagc 780
tataatatgg acagattcat aaacaag 807

```

```

<210> 3
<211> 705
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)..(705)
<223> Human cDNA sequence encoding residues 24-258 of
      11-beta-hydroxysteroid dehydrogenase type 1

```

```

<400> 3
aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggccagc 60
aaaggggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg 120
acagcgaggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttgagca 180
gcctcagcac actacattgc tggcaccatg gaagacatga ccttcgcaga gcaatttggt 240
gccaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac 300
acttctttga atctttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac 360
ttcctcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga 420
agcattgttg tcgtctcctc tctggctggg aaagtggctt atccaatggg tgctgcctat 480
tctgcaagca agtttgcttt ggatgggttc ttctcctcca tcagaaagga atattcagtg 540
tccaggggtca atgtatcaat cactctctgt gttcttgccc tcatagacac agaaacagcc 600
atgaaggcag tttctgggat agtccatatg caagcagctc caaaggagga atgtgccctg 660
gagatcatca aaggggggagc tctgcgccaa gaagaagtgt attat 705

```

```

<210> 4
<211> 732
<212> DNA
<213> Homo sapiens

```

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

<220>
 <221> misc_feature
 <222> (1)..(732)
 <223> Human cDNA sequence encoding residues 24-267 of
 11-beta-hydroxysteroid dehydrogenase type 1

<400> 4
 aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggccagc 60
 aaagggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg 120
 acagcgaggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttggagca 180
 gcctcagcac actacattgc tggcaccatg gaagacatga ccttcgcaga gcaatttggt 240
 gcccaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac 300
 acttctttga atctttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac 360
 ttcttcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga 420
 agcattgttg tcgtctcttc tctggctggg aaagtggctt atccaatggt tgctgcctat 480
 tctgcaagca agtttgcttt ggatgggttc ttctcctcca tcagaaagga atattcagtg 540
 tccaggttca atgtatcaat cactctctgt gttcttggcc tcatagacac agaaacagcc 600
 atgaaggcag tttctgggat agtccatatg caagcagctc caaaggagga atgtgccctg 660
 gagatcatca aagggggagc tctgcgcaa gaagaagtgt attatgacag ctactcttgg 720
 accactcttc tg 732

<210> 5
 <211> 286
 <212> PRT
 <213> Artificial

<220>
 <223> Amino acid sequence for residues 24-292 of 11-beta-hydroxysteroid
 dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQHQPL tag

<400> 5
 Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Pro
 1 5 10 15
 Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile
 20 25 30
 Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu
 35 40 45
 Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr
 50 55 60

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala
65 70 75 80

His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe
85 90 95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu
100 105 110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His
115 120 125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu
130 135 140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val
145 150 155 160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala
165 170 175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg
180 185 190

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val
195 200 205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile
210 215 220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile
225 230 235 240

Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr Asp Ser Ser Leu
245 250 255

Trp Thr Thr Leu Leu Ile Arg Asn Pro Cys Arg Lys Ile Leu Glu Phe
260 265 270

Leu Tyr Ser Thr Ser Tyr Asn Met Asp Arg Phe Ile Asn Lys
275 280 285

<210> 6
<211> 252
<212> PRT
<213> Artificial

<220>
<223> Amino acid sequence for residues 24-258 of 11-beta-hydroxysteroid
Page 5

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt
dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQPL tag

<400> 6

Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Gln Pro
1 5 10 15

Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile
20 25 30

Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu
35 40 45

Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr
50 55 60

Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala
65 70 75 80

His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe
85 90 95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu
100 105 110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His
115 120 125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu
130 135 140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val
145 150 155 160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala
165 170 175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg
180 185 190

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val
195 200 205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile
210 215 220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile
225 230 235 240

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr
245 250

<210> 7

<211> 261

<212> PRT

<213> Artificial

<220>

<223> Amino acid sequence for residues 24-267 of 11-beta-hydroxysteroid dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQHQPL tag

<400> 7

Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Pro
1 5 10 15

Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile
20 25 30

Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu
35 40 45

Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr
50 55 60

Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala
65 70 75 80

His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe
85 90 95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu
100 105 110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His
115 120 125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu
130 135 140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val
145 150 155 160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala
165 170 175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg
180 185 190

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val
195 200 205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile
210 215 220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile
225 230 235 240

Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr Asp Ser Ser Leu
245 250 255

Trp Thr Thr Leu Leu
260

<210> 8
<211> 24
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsd1_24-f

<400> 8
aacgaggaat tcagaccaga gatg 24

<210> 9
<211> 29
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsd1_292-r

<400> 9
cttgtttatg aatctgtcca tattatagc 29

<210> 10
<211> 23
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsdC272Sqcf

<400> 10
tcagaaatcc atccaggaag atc 23

<210> 11
<211> 23
<212> DNA
<213> Artificial

<220>

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

<223> DNA sequence encoding PCR Primer hsdC272Sqcr

<400> 11
gatcttcctg gatggatttc tga 23

<210> 12
<211> 27
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsd1-258-r

<400> 12
ataatacact tcttcttggc gcagagc 27

<210> 13
<211> 27
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsd1-267-r

<400> 13
cagaagagtg gtccagagtg agctgtc 27



SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt
SEQUENCE LISTING

<110> Syrrx, Inc.
<120> CRYSTALLIZATION OF 11-BETA-HYDROXYSTEROID DEHYDROGENASE TYPE 1
<130> SYR-HSD-5001-C1
<140> US 10/800,024
<141> 2004-03-12
<160> 13
<170> PatentIn version 3.2
<210> 1
<211> 292
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(292)
<223> Amino acid sequence for full-length human wild type
11-beta-hydroxysteroid dehydrogenase type 1

<400> 1

Met Ala Phe Met Lys Lys Tyr Leu Leu Pro Ile Leu Gly Leu Phe Met
1 5 10 15

Ala Tyr Tyr Tyr Tyr Ser Ala Asn Glu Glu Phe Arg Pro Glu Met Leu
20 25 30

Gln Gly Lys Lys Val Ile Val Thr Gly Ala Ser Lys Gly Ile Gly Arg
35 40 45

Glu Met Ala Tyr His Leu Ala Lys Met Gly Ala His Val Val Val Thr
50 55 60

Ala Arg Ser Lys Glu Thr Leu Gln Lys Val Val Ser His Cys Leu Glu
65 70 75 80

Leu Gly Ala Ala Ser Ala His Tyr Ile Ala Gly Thr Met Glu Asp Met
85 90 95

Thr Phe Ala Glu Gln Phe Val Ala Gln Ala Gly Lys Leu Met Gly Gly
100 105 110

Leu Asp Met Leu Ile Leu Asn His Ile Thr Asn Thr Ser Leu Asn Leu
115 120 125

Phe His Asp Asp Ile His His Val Arg Lys Ser Met Glu Val Asn Phe
130 135 140

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

Leu Ser Tyr Val Val Leu Thr Val Ala Ala Leu Pro Met Leu Lys Gln
145 150 155 160

Ser Asn Gly Ser Ile Val Val Val Ser Ser Leu Ala Gly Lys Val Ala
165 170 175

Tyr Pro Met Val Ala Ala Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly
180 185 190

Phe Phe Ser Ser Ile Arg Lys Glu Tyr Ser Val Ser Arg Val Asn Val
195 200 205

Ser Ile Thr Leu Cys Val Leu Gly Leu Ile Asp Thr Glu Thr Ala Met
210 215 220

Lys Ala Val Ser Gly Ile Val His Met Gln Ala Ala Pro Lys Glu Glu
225 230 235 240

Cys Ala Leu Glu Ile Ile Lys Gly Gly Ala Leu Arg Gln Glu Glu Val
245 250 255

Tyr Tyr Asp Ser Ser Leu Trp Thr Thr Leu Leu Ile Arg Asn Pro Cys
260 265 270

Arg Lys Ile Leu Glu Phe Leu Tyr Ser Thr Ser Tyr Asn Met Asp Arg
275 280 285

Phe Ile Asn Lys
290

<210> 2
<211> 807
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(807)
<223> Human cDNA sequence encoding residues 24-292 of
11-beta-hydroxysteroid dehydrogenase type 1

<400> 2
aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggccagc 60
aaagggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg 120
acagcgaggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttggagca 180
gcctcagcac actacattgc tggcaccatg gaagacatga ccttcgcaga gcaatttggt 240

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

```

gcccgaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac 300
acttcttttga atcttttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac 360
ttcctcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga 420
agcattgttg tcgtctcctc tctggctggg aaagtggctt atccaatggg tgctgcctat 480
tctgcaagca agtttgcttt ggatgggttc ttctcctcca tcagaaagga atattcagtg 540
tccaggggtca atgtatcaat cactctctgt gttcttgccc tcatagacac agaaacagcc 600
atgaaggcag tttctgggat agtccatatt caagcagctc caaaggagga atgtgccctg 660
gagatcatca aaggggggagc tctgcgccaa gaagaagtgt attatgacag ctcaactctgg 720
accactcttc tgatcagaaa tccatgcagg aagatcctgg aatttctcta ctcaacgagc 780
tataatatgg acagattcat aaacaag 807

```

```

<210> 3
<211> 705
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)..(705)
<223> Human cDNA sequence encoding residues 24-258 of
      11-beta-hydroxysteroid dehydrogenase type 1

```

```

<400> 3
aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggccagc 60
aaagggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg 120
acagcgaggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttgagca 180
gcctcagcac actacattgc tggcaccatg gaagacatga ccttcgcaga gcaatttggt 240
gcccaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac 300
acttcttttga atcttttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac 360
ttcctcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga 420
agcattgttg tcgtctcctc tctggctggg aaagtggctt atccaatggg tgctgcctat 480
tctgcaagca agtttgcttt ggatgggttc ttctcctcca tcagaaagga atattcagtg 540
tccaggggtca atgtatcaat cactctctgt gttcttgccc tcatagacac agaaacagcc 600
atgaaggcag tttctgggat agtccatatt caagcagctc caaaggagga atgtgccctg 660
gagatcatca aaggggggagc tctgcgccaa gaagaagtgt attat 705

```

```

<210> 4
<211> 732
<212> DNA
<213> Homo sapiens

```

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

<220>
 <221> misc_feature
 <222> (1)..(732)
 <223> Human cDNA sequence encoding residues 24-267 of
 11-beta-hydroxysteroid dehydrogenase type 1

<400> 4
 aacgaggaat tcagaccaga gatgctccaa ggaaagaaag tgattgtcac aggggccagc 60
 aaagggatcg gaagagagat ggcttatcat ctggcgaaga tgggagccca tgtggtggtg 120
 acagcgaggt caaaagaaac tctacagaag gtggtatccc actgcctgga gcttggagca 180
 gcctcagcac actacattgc tggcaccatg gaagacatga ccttcgcaga gcaatttggt 240
 gcccaagcag gaaagctcat gggaggacta gacatgctca ttctcaacca catcaccaac 300
 acttctttga atctttttca tgatgatatt caccatgtgc gcaaaagcat ggaagtcaac 360
 ttctcagtt acgtggtcct gactgtagct gccttgccca tgctgaagca gagcaatgga 420
 agcattgttg tcgtctcttc tctggctggg aaagtggctt atccaatggt tgctgcctat 480
 tctgcaagca agtttgcttt ggatgggttc ttctcctcca tcagaaagga atattcagtg 540
 tccagggatca atgtatcaat cactctctgt gttcttgccc tcatagacac agaaacagcc 600
 atgaaggcag tttctgggat agtccatatg caagcagctc caaaggagga atgtgccctg 660
 gagatcatca aagggggagc tctgcgcaa gaagaagtgt attatgacag ctactctgg 720
 accactcttc tg 732

<210> 5
 <211> 286
 <212> PRT
 <213> Artificial

<220>
 <223> Amino acid sequence for residues 24-292 of 11-beta-hydroxysteroid
 dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQPL tag

<400> 5
 Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Pro
 1 5 10 15
 Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile
 20 25 30
 Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu
 35 40 45
 Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr
 50 55 60

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala
65 70 75 80

His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe
85 90 95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu
100 105 110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His
115 120 125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu
130 135 140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val
145 150 155 160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala
165 170 175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg
180 185 190

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val
195 200 205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile
210 215 220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile
225 230 235 240

Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr Asp Ser Ser Leu
245 250 255

Trp Thr Thr Leu Leu Ile Arg Asn Pro Cys Arg Lys Ile Leu Glu Phe
260 265 270

Leu Tyr Ser Thr Ser Tyr Asn Met Asp Arg Phe Ile Asn Lys
275 280 285

<210> 6
<211> 252
<212> PRT
<213> Artificial

<220>
<223> Amino acid sequence for residues 24-258 of 11-beta-hydroxysteroid
Page 5

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt
dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQPL tag

<400> 6

Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Gln Pro
1 5 10 15

Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile
20 25 30

Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu
35 40 45

Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr
50 55 60

Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala
65 70 75 80

His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe
85 90 95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu
100 105 110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His
115 120 125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu
130 135 140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val
145 150 155 160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala
165 170 175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg
180 185 190

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val
195 200 205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile
210 215 220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile
225 230 235 240

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr
245 250

<210> 7

<211> 261

<212> PRT

<213> Artificial

<220>

<223> Amino acid sequence for residues 24-267 of 11-beta-hydroxysteroid dehydrogenase type 1 with a N-terminal MKHQHQHQHQHQQPL tag

<400> 7

Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Gln Pro
1 5 10 15

Leu Asn Glu Glu Phe Arg Pro Glu Met Leu Gln Gly Lys Lys Val Ile
20 25 30

Val Thr Gly Ala Ser Lys Gly Ile Gly Arg Glu Met Ala Tyr His Leu
35 40 45

Ala Lys Met Gly Ala His Val Val Val Thr Ala Arg Ser Lys Glu Thr
50 55 60

Leu Gln Lys Val Val Ser His Cys Leu Glu Leu Gly Ala Ala Ser Ala
65 70 75 80

His Tyr Ile Ala Gly Thr Met Glu Asp Met Thr Phe Ala Glu Gln Phe
85 90 95

Val Ala Gln Ala Gly Lys Leu Met Gly Gly Leu Asp Met Leu Ile Leu
100 105 110

Asn His Ile Thr Asn Thr Ser Leu Asn Leu Phe His Asp Asp Ile His
115 120 125

His Val Arg Lys Ser Met Glu Val Asn Phe Leu Ser Tyr Val Val Leu
130 135 140

Thr Val Ala Ala Leu Pro Met Leu Lys Gln Ser Asn Gly Ser Ile Val
145 150 155 160

Val Val Ser Ser Leu Ala Gly Lys Val Ala Tyr Pro Met Val Ala Ala
165 170 175

Tyr Ser Ala Ser Lys Phe Ala Leu Asp Gly Phe Phe Ser Ser Ile Arg
180 185 190

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

Lys Glu Tyr Ser Val Ser Arg Val Asn Val Ser Ile Thr Leu Cys Val
195 200 205

Leu Gly Leu Ile Asp Thr Glu Thr Ala Met Lys Ala Val Ser Gly Ile
210 215 220

Val His Met Gln Ala Ala Pro Lys Glu Glu Cys Ala Leu Glu Ile Ile
225 230 235 240

Lys Gly Gly Ala Leu Arg Gln Glu Glu Val Tyr Tyr Asp Ser Ser Leu
245 250 255

Trp Thr Thr Leu Leu
260

<210> 8
<211> 24
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsd1_24-f

<400> 8
aacgaggaat tcagaccaga gatg

24

<210> 9
<211> 29
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsd1_292-r

<400> 9
cttgtttatg aatctgtcca tattatagc

29

<210> 10
<211> 23
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsdC272Sqcf

<400> 10
tcagaaatcc atccaggaag atc

23

<210> 11
<211> 23
<212> DNA
<213> Artificial

<220>

SYR-HSD-5001-C1 Substitute Sequence Listing.ST25.txt

<223> DNA sequence encoding PCR Primer hsdC272Sqr

<400> 11
gatcttcctg gatggatttc tga 23

<210> 12
<211> 27
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsd1-258-r

<400> 12
ataatacact tcttcttggc gcagagc 27

<210> 13
<211> 27
<212> DNA
<213> Artificial

<220>
<223> DNA sequence encoding PCR Primer hsd1-267-r

<400> 13
cagaagagtg gtccagagtg agctgtc 27